CPCCo Central Plateau Cleanup Company

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Administrative Procedure

CPCC-PRO-SH-40498

PRC-PRO-SH-40498

Toxic Metals Exposure Control

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Change Summary

Description of Change

Editorial change consists of updating company terminology (CHPRC to CPCCo) and referenced documents (PRC to CPCC), as well as an update to the current procedure templates, including spell check and updated table of contents.

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TABLE OF CONTENTS

List of Tables

List of Appendixes

1.0 INTRODUCTION

1.1 Purpose

This procedure provides direction for controlling exposures to toxic metals (cadmium, hexavalent chromium, and lead) in accordance with Occupational Safety and Health Administration (OSHA) 29 CFR 1926 or 29 CFR 1910.

NOTE: *While cadmium, hexavalent chromium, and lead are not the only toxic metals present on site, this procedure focuses on them due to them having similar exposure risks and the fact that they have similar regulatory requirements.*

1.2 Scope

With the exceptions listed below, this procedure applies to cadmium, hexavalent chromium, and lead.

For any given operation or activity, either the OSHA general industry standard or the OSHA construction standard applies. Both cannot apply at the same time to the same activity. Line management, supported by the project/facility Occupational Safety and Industrial Hygiene (OS&IH) professional, should categorize operations and activities as either construction or general industry during the work planning process.

1.3 Exceptions

- Organic lead compounds except organic lead soaps
- Exposures to Portland cement (hexavalent chromium)

1.4 Applicability

This procedure applies to all Central Plateau Cleanup Company (CPCCo) team members.

1.5 Implementation

This procedure is effective on the date published.

2.0 RESPONSIBILITIES

2.1 Competent Person

- Conducts oversight/inspections of work as required by the applicable compliance plan during construction (29 CFR 1926) activities.

NOTE: *A competent person is not required for construction activities involving only hexavalent chromium.*

2.2 Occupational Safety and Industrial Hygiene (OS&IH) Professionals

- Completes an Industrial Hygiene Exposure Assessment (IHEA).
- Communicates applicable requirements to line management during the work planning process.
- Assists line management in determining which OSHA standard is applicable to a given work activity.

2.3 Human Resources

- Assists line management and the Toxic Metals Technical Authority (TA) in ensuring that medical removal benefits are properly administered in accordance with the applicable OSHA regulation.
- Coordinates with Human Resources, line management, Toxic Metals TA, and the Site Occupational Medical provider whenever an employee exhibits signs or symptoms of toxic metal exposure.

2.4 Line Management

- Determines, with assistance from OS&IH, which OSHA standard is applicable to a given work activity.
- Ensures the potential exposures of employees are adequately documented in each employee's Employee Job Task Analysis (EJTA).
- Coordinates with Human Resources, the Toxic Metals TA, and the Site Occupational Medical Provider whenever an employee exhibits signs or symptoms of toxic metal exposure.
- Ensures the requirements of the IHEAs are adequately implemented during lead activities.

2.5 Toxic Metals Technical Authority (TA)

- Assists line management and Human Resources in ensuring medical removal benefits are properly administered.
- Determines whether job rotation is an appropriate administrative control.
- Determines whether the use of launderable coveralls is appropriate in areas where employee exposure exceeds the permissible exposure limit (PEL).
- Coordinates with Human Resources, line management, and the Site Occupational Medical Provider whenever an employee exhibits signs or symptoms of toxic metal exposure.

3.0 PROCESS

3.1 Permissible Exposure Limits and Action Levels

NOTE: *The OSHA PELS are at least as conservative as the ACGIH TLVs for cadmium, hexavalent chromium, and lead.*

The Cadmium and Hexavalent Chromium regulations do not include an adjustment for extended work shifts. While most CPCCo workers are on a 4x10 hour work schedule, workers are not normally involved in more than 8 hours of tasks that have the potential for exposure.

3.1.1 Cadmium

The PEL is 5 µg/m^3 8-hr time weighted average (TWA).

The action level (AL) is 2.5 µg/m^3 8-hr TWA.

3.1.2 Hexavalent Chromium

The PEL is 5 µg/m^3 8-hr time weighted average (TWA).

The action level (AL) is 2.5 µg/m^3 8-hr TWA.

3.1.3 Lead

The PEL is 50 µg/m^3 8-hr time weighted average (TWA). For extended shifts, an adjusted PEL shall be calculated using the following formula:

PEL (in µg/m^3) = 400/hr worked in the day

The action level (AL) is 30 µg/m^3 8-hr TWA. While the AL is not normally adjusted for extended shifts, the PEL shall also be the AL in those cases where the PEL is lower than the AL.

3.2 Determination of Appropriate OSHA Regulation

While the majority of the requirements in the Construction and General Industry standards are the same, there are certain requirements that are specific to Construction or General Industry.

Actionee	*Step*	*Action*
Line Management	1.	NOTIFY the OS&IH professional during the work planning process of the potential for toxic metals exposure.
	2.	DETERMINE with assistance from the OS&IH professional whether the standard for Construction (29 CFR 1926) or General Industry (29 CFR 1910) applies.
		a. Construction work is defined as construction, alteration, or repair, including painting and decorating. This includes:
		1) Demolition or salvage of structures where toxic metals or materials containing toxic metals are present.
		2) Removal or encapsulation of materials containing toxic metals.
		3) New construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain toxic metals or materials containing toxic metals.
		4) Welding, cutting, or brazing on toxic metals or toxic metal alloys.
		5) Electrical grounding with cadmium welding or electrical work using cadmium-coated conduit.
		6) Installation of products containing toxic metals.
		7) Toxic metals contamination/emergency cleanup.
		8) Transportation, disposal, storage, or containment of toxic metals or materials containing toxic metals on the site or location at which construction activities are performed.
		9) Maintenance operations associated with the construction activities described above.
		b. All other activities are governed by the General Industry standard.

3.3 Hazard Identification and Documentation

3.3.1 Initial Determination

Actionee	*Step*	*Action*
OS&IH Professional	1.	DETERMINE if sample data exists that may be used to make the initial determination. To use previously collected sample data to make the initial determination, the sample data must have been obtained within the past 12 months during work operations conducted under workplace conditions closely resembling the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the employer's current operations. a. IF appropriate sample data is not available, THEN GO TO step 2. b. IF appropriate sample data is available, THEN GO TO step 4.
	2.	IDENTIFY the exposed employees who are identified as likely to be exposed to the greatest airborne concentrations of toxic metals in the workplace.
	3.	MONITOR a representative sample of the exposed employees who are identified as likely to be exposed to the greatest airborne concentrations of toxic metals in the workplace.

NOTE: *Initial monitoring is not required where objective data (such as described in Appendix B) demonstrating that a particular product or material containing cadmium, lead, and/or hexavalent chromium or a specific process, operation, or activity involving cadmium, lead, and/or hexavalent chromium cannot result in employee exposure at or above the action level during processing, use, or handling.*

4. CONDUCT an initial determination (exposure assessment) to determine the potential for employee exposure to toxic metals. The initial determination shall be based on the employee exposure monitoring results and any of the following relevant considerations:

   a. Any information, observations, or calculations which would indicate employee exposure to toxic metals.

   b. Any previous measurements of airborne contaminants.

   c. Any employee complaints of symptoms which may be attributable to exposure to toxic metals.

Actionee	*Step*	*Action*
OS&IH Professional	5.	DETERMINE if any employee may be exposed at or above the either the AL or the PEL. a. If no employees have the potential to be exposed above the AL, no further sampling is required. b. If any employee may be exposed above the AL but below the PEL, representative sampling must be conducted at least every 6 months. c. If any employee may be exposed above the PEL, representative sampling must be conducted at least every 3 months.
	6.	DOCUMENT the results of the initial exposure assessment. The documentation shall include a summary of all of the information involved in steps 1 through 4, including a summary of all sampling data.

3.3.2 Protection of Employees During Exposure Assessment

Until an exposure assessment is performed and documented that the employee performing any of the listed tasks is not exposed above the PEL, supervision must treat employees as if they were exposed above the PEL while performing the listed toxic metals related tasks, where toxic metals is present. This means providing interim protection including appropriate work practices, respiratory protection, protective work clothing and equipment, change areas, hand washing facilities, biological monitoring, and training.

Actionee	*Step*	*Action*
OS&IH Professional	1.	DETERMINE if coatings or paint containing toxic metals are present and will be disturbed, THEN IDENTIFY the methods that will disturb the coatings or paint.

NOTE: *The required elements listed go beyond the standard requirements for an IHEA. These elements are required to ensure that the IHEA is compliant with OSHA requirements for compliance plans.*

A competent person is not required for construction activities involving only hexavalent chromium.

2. IF sample data is not available,
   THEN DEVELOP an IHEA. The IHEA shall include:

   - Monitoring requirements
   - Competent person requirements
   - Personal protective equipment
   - Respiratory protection (in accordance with the requirements of Table 1 in Section 3.4.3)

Actionee	*Step*	*Action*
OS&IH Professional		• Engineering controls, including ventilation systems and containments • Housekeeping • Change areas • Hand washing facilities • Regulated area requirements • Medical monitoring • Job rotation requirements • Worker training

3.3.3 Additional Exposure Assessments

Whenever there has been a change of equipment, process, control, personnel, or a new task has been initiated that may result in additional employees being exposed to toxic metals at or above the action level or may result in employees already exposed at or above the action level being exposed above the PEL, another exposure assessment shall be conducted in accordance with Section 3.3.1.

3.4 Compliance Plan

Compliance plans are required for all cadmium and/or lead work subject to the requirements of OSHA's Construction Standard (as determined in Section 3.2) and for any work subject to the requirements of OSHA's General Industry Standard that has the potential for employee exposures to exceed the PEL. IHEAs completed in accordance with Section 3.3.2 contain the required content for compliance plans.

3.4.1 Job Rotation

If a project intends to use job rotation as a means of reducing employees' TWA exposure to toxic metals, controls are required to ensure that it is properly implemented.

Actionee	*Step*	*Action*
Line Management	1.	CONTACT the Toxic Metals Exposure Control TA to determine if job rotation is an appropriate control.
Toxic Metals Exposure Control TA	2.	DETERMINE if job rotation is an appropriate control: • IF YES, THEN COORDINATE Line Management to determine how to effectively implement job rotation. • ENSURE the job rotation process is incorporated into the IHEA. • IF NO, THEN COMMUNICATE to the OS&IH Professional that the IHEA must explicitly prohibit job rotation.

Actionee	*Step*	*Action*
Line Management	3.	ENSURE the following information is recorded for all employees who are using administrative controls as a means of reducing exposure: • Name or identification number of each affected employee • Duration and exposure levels at each job or work station where each affected employee is located • Any other information which may be useful in assessing the reliability of administrative controls to reduce exposure to toxic metals

3.4.2 Protective Work Clothing and Equipment

Actionee	*Step*	*Action*
OS&IH Professional	1.	REQUIRE protective work clothing and equipment in the IHEA whenever: • Interim measures in accordance with Section 3.3.2 are required • Employee exposures are above the PEL • Employees are exposed to metal compounds that may present hazards such as skin irritation Protective work clothing may include (but is not limited to): • Disposable coveralls or similar full-body work clothing • Gloves, hats, and shoes or disposable shoe coverlets • Face shields, vented goggles, and safety glasses with side shields
	2.	SPECIFY that only disposable coveralls are to be used in the areas identified in step 1 unless specific permission has been obtained from the Toxic Metals Exposure Control TA. • If launderable coveralls are to be used in an area identified in step 1, a laundry handling plan must be written and approved by the Toxic Metal Exposure Control TA.

3.4.3 Respiratory Protection

Respiratory protection program requirements are documented in DOE-0352, *Hanford Site Respiratory Protection Program (HSRPP)*.

Table 1 - Interim Respiratory Protection Requirements

Task That Disturbs Toxic Metal Containing Coating or Paint	Minimum Required Respiratory Protection
• Manual demolition of structures (e.g., dry wall), manual scraping, manual sanding, heat gun applications, and power tool cleaning with dust collection systems • Spray painting with paint containing cadmium, hexavalent chromium, and/or lead • Any tasks where the employer has any reason to believe exposure could be in excess of the PEL	Half face APR with P100 cartridges
• Rivet busting; power tool cleaning without dust collection systems; cleanup activities where dry expendable abrasives are used; and abrasive blasting enclosure movement and removal • Using lead-containing mortar • Lead burning	Full face APR with P100 cartridges
• Abrasive blasting • Welding • Cutting • Torch burning	Full face PAPR or hood PAPR* with P100 cartridges * - *Hood PAPR's must be certified by their manufacturer as providing a Assigned Protection Factor of 1000*

Actionee	*Step*	*Action*
OS&IH Professional	1.	IDENTIFY all respiratory protection requirements in the IHEA.

3.4.4 Housekeeping

Actionee	*Step*	*Action*
OS&IH Professional	1.	IDENTIFY any specific housekeeping requirements and prohibitions in the IHEA that are necessary to ensure all surfaces are maintained as free as practicable of accumulations of toxic metals.

3.4.5 Hygiene Facilities and Practices

Actionee	*Step*	*Action*
OS&IH Professional	1.	IDENTIFY the hygiene facility requirements in the IHEA. The minimum hygiene facilities include: • Change areas • Eating facilities • Handwashing facilities

NOTE: *While there is not a regulatory requirement for showers to be located at the job site, the OS&IH Professional may determine that showers at the job site are appropriate for the work conditions.*

2. DETERMINE whether shower facilities are required. Shower facilities are required for all employees whose exposure to cadmium, hexavalent chromium, and/or lead may exceed the PEL.

3. DOCUMENT the shower facility requirements in the IHEA.

4. IDENTIFY required hygiene practices in the IHEA. Hygiene practice that may be required include:
   - No eating, drinking, smoking, or applying cosmetics in the work area
   - Mandatory hand and face washing prior to eating, drinking, smoking, or applying cosmetics
   - Removal of protective work clothing when leaving the work area
   - High energy particulate air (HEPA) vacuuming of protective work clothing prior to entering lunchroom facilities, kitchens, or eating areas
   - Mandatory showering at the end of the employee's shift

3.5 Employee Training

Actionee	*Step*	*Action*
Line Management	1.	IDENTIFY all employees that have the potential for airborne exposure to cadmium, hexavalent chromium, and/or lead at any concentration.
	2.	ENSURE employees Training Matrix reflects the training requirements contained in Appendix C.
	3.	ENSURE all employees that have received the appropriate training prior to commencing work.
OS&IH Professional	4.	ENSURE *Course Completion Roster*(s) (Site Form A-6005-129) is completed and submitted to Training whenever: • Emergent training is conducted for employees who may be exposed to lead or cadmium

3.6 Signs and Labels

Actionee	*Step*	*Action*
Line Management	1.	ENSURE all areas where employee exposures to cadmium, hexavalent chromium, and/or lead may exceed the PEL are posted with signs in accordance with Appendix D.
	2.	ENSURE all containers of contaminated protective clothing, equipment, waste, scrap, or debris are labeled in accordance with Appendix D.

3.7 Oversight of Toxic Metal Work

Actionee	*Step*	*Action*
Line Management	1.	ENSURE the mechanical performance of all systems used in controlling exposure is evaluated as necessary to maintain its effectiveness.
	2.	ENSURE employees follow good work practices as defined in the IHEA.
	3.	ENSURE all required protective work clothing and equipment is available to employees and is maintained in good condition.
	4.	ENSURE employees remove protective clothing in the change area.

NOTE: *The requirement for the labeling of contaminated clothing only applies when the clothing is worn in areas where employee exposure exceeds the PEL.*

	5.	ENSURE all contaminated protective clothing is disposed of in a closed container that has the appropriate label(s) as identified in Appendix D.

Actionee	*Step*	*Action*
Line Management	6.	ENSURE the removal of toxic metals from protective clothing and equipment is done using methods that minimizes the dispersion of dust into the air. Blowing, shaking, or any other means which disperses toxic metals into the air are prohibited.
	7.	ENSURE all surfaces are maintained as free as practicable of accumulations of toxic metals.
	8.	ENSURE the cleaning of floors and other surfaces are done in accordance with the IHEA.
	9.	ENSURE all required hygiene facilities are available prior to commencing work.
	10.	ENSURE employees comply with all required hygiene practices.
Project OS&IH Manager	11.	IF the work involves construction activities where cadmium and/or lead may be present, THEN ENSURE the OS&IH professional assigned to provide oversight has been qualified as a competent person for the toxic metal(s) that may be present.
OS&IH Professional	12.	ENSURE all required exposure monitoring (and any other required OS&IH activities) are conducted as required by the IHEA. a. ENSURE hexavalent chromium samples are analyzed within method-specified time limits.
	13.	CONDUCT oversight of the work as required by the IHEA.

4.0 FORMS

A-6005-129, *Course Completion Roster*

5.0 RECORD IDENTIFICATION

All records are required to be managed in accordance with CPCC-PRO-IRM-10588, *Records Management Processes*.

Records Capture Table

Name of Record	Submittal Responsibility	Retention Responsibility
Objective data demonstrating that a particular product or material containing cadmium, chromium (VI), and/or lead or a specific process, operation or activity involving toxic metal(s) cannot result in employee exposure at or above the action level during processing	OS&IH in accordance with CPCC-PRO-SH-17916	In accordance with CPCC-PRO-SH-17916
Toxic metals exposure monitoring data	OS&IH in accordance with CPCC-PRO-SH-409	IRM Service Provider (via SWIHD)
Industrial Hygiene Exposure Assessments	OS&IH in accordance with CPCC-PRO-SH-17916	OS&IH in accordance with CPCC-PRO-SH-17916
Course Completion Roster, A-6005-129	OS&IH	Training

6.0 SOURCES

6.1 Requirements

10 CFR 851, “Worker Safety and Health Program”
29 CFR 1910.1020, “Access to Employee Exposure and Medical Records”
29 CFR 1910.1025, “Lead”
29 CFR 1910.1026, “Chromium (VI)”
29 CFR 1910.1027, “Cadmium”
29 CFR 1926.62, “Lead”
29 CFR 1926.1126, “Chromium (VI)”
29 CFR 1926.1127, “Cadmium”
CPCC-MP-SH-32219, *10 CFR 851 CPCCo Worker Safety and Health Program Description*

6.2 References

ACGIH, *2016 TLVs® and BEIs ®*
CPCC-PRO-IRM-10588, *Records Management Processes*
CPCC-PRO-SH-409, *Industrial Hygiene Monitoring, Reporting, and Records Management*
CPCC-PRO-SH-17916, *Industrial Hygiene Exposure Assessment*
CPCC-PRO-SH-52755, *Employee Job Task Analysis*
DOE-0352, *Hanford Site Respiratory Protection Program (HSRPP)*

Appendix A - Typical Lead Containing Materials and Activities

Lead may be found in paints, shielding materials, bulk metals, solders, alloys, nails for metal roofs, mortars, glass, piping systems, ammunition, metal seams and joints, laboratory and process chemicals, various equipment and building components, waste materials, and contaminated environmental media, as well as in other materials.

Lead exposure may result from a variety of operations/activities, including but not limited to the following:

- Lead-brick shielding/handling,
- Weapons firing (patrol),
- Pouring molten lead,
- Soldering,
- Welding/cutting/grinding,
- Sandblasting, abrasive blasting,
- Painting and paint removal,
- Loading lead ballast/shot,
- Use of powder actuated tools,
- Lead cable pulling, and
- Maintenance activities involving lead or lead containing materials.

Operations covered under OSHA's *Lead* construction standard (29 CFR 1926.62)

The OSHA *Lead* construction standard defines covered construction work as construction, alteration and repair, including painting and decorating. It includes, but is not limited to, the following:

- Demolition or salvage of structures where lead or materials containing lead are present;
- Removal or encapsulation of materials containing lead (e.g., lead paint abatement);
- New construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain lead or lead-containing materials;
- Installation of products containing lead;
- Lead contamination/emergency cleanup;
- Transportation, disposal, storage, or containment of lead or lead-containing materials on the site or location at which construction activities are performed; and
- Maintenance operations associated with the construction activities described in this paragraph.

Appendix B - Use of Objective Data for Establishing Toxic Metals are Below the AL

The construction standards do not specify de minimus levels of cadmium, chromium (VI), or lead in materials below which the requirements of the standards do not apply. The standards, however, do allow the use of objective data to demonstrate that the employee exposure associated with a particular product or material or a specific process, operation, or activity can't exceed the applicable permissible exposure limit

While de minimus levels of toxic metals cannot be defined in this procedure that would be applicable to all materials and all activities, a defensible rationale can be developed for a de minimus condition that combines a toxic metal concentration threshold with a co-located indicator parameter (total particulates).

For the purposes of this procedure, dust- or mist-generating activities are generally safe from occupational exposure above the AL:

- When the total content of toxic metal involved is less than the identified maximum acceptable concentration (see below), and
- When total particulates in the breathing zone of workers are maintained below the Threshold Limit Value (TLV) of 10 mg/m^3 as an 8-hour TWA. Both of these criteria must be met. This de minimus condition does not apply to fume-generating activities (e.g., heat-producing activities such as welding and burning).

Using lead as an example, the objective basis for this de minimus condition is as follows. For a material with a total lead concentration of 1,000 µg/g, total airborne particulate concentrations of 30 mg/m^3 would have to be generated in the breathing zone of a worker over an 8-hour work shift to result in a lead exposure at the AL. This total particulate concentration is three times greater than the TLV of 10 mg/m^3 for total particulates. To apply this 1,000 µg/g (0.1%) criterion, line management must ensure that total particulate concentrations in the breathing zone of workers, regardless of respiratory protection, are controlled to below the total particulate TLV of 10 mg/m^3, which offers a threefold margin of safety for lead exposure relative to the AL. This de minimus condition does not apply to fume generating activities, because heat can selectively liberate lead fume from the material into the air and the worker's breathing zone.

Based on this process, the maximum acceptable concentrations for this process to apply are:

Cadmium – 100 µg/g
Chromium (VI) – 100 µg/g
Lead – 1,000 µg/g

This objective data process is based on fundamental industrial hygiene principles. As such, its application must be done with project OS&IH professional input and must be based on a hazard analysis of jobs and tasks. Other accepted risk assessment or industrial hygiene analyses may also be acceptable for defining de minimus conditions. Whenever applying the de minimus condition to construction activities, it must be done with appropriate input from the project OS&IH professional who should evaluate whether there is reason to believe exposures could be at or above the action level.

Appendix C - Training Requirements Summary

Requirement	Any activity		Airborne metal present		Exposure above AL		Exposure above PEL	
	1910	1926	1910	1926	1910	1926	1910	1926
Cadmium	Course 600037	Course 600037	Course 600037	Course 600037	Course 600037	Course 600037	Course 600037	Course 600037
Chromium (VI)	Course 261126	Course 261126	Course 261126	Course 261126	Course 261126	Course 261126	Course 261126	Course 261126
Lead	Course 620150	Course 620150	Course 620150	Course 620150	Course 620150 or 020150	Course 620150 or 020150	Course 620150 or 020150	Course 620150 or 020150

NOTE 1: *For emergent situations where employees may have exposure to airborne lead, an OS&IH professional may brief workers on 1926.62 Appendices A and B so that they may work. Employees briefed by an OS&IH professional are expected to complete course 620150 in a timely manner.*

NOTE 2: *For emergent situations where employees may have exposure to airborne cadmium, a Cadmium Competent Person may brief workers on the subjects listed below so that they may work. Employees briefed by a Cadmium Competent Person are expected to complete course 600037 in a timely manner.*

<u>Required Cadmium Briefing Content</u>

- *Overview of 1910.1027 and 1926.1127*
- *Review of 1910.1027 App A*
- *Quantity, location, manner of use, release, and storage of cadmium in the workplace and the specific nature of operations that could result in exposure to cadmium*
- *Engineering controls and work practices*
- *PPE requirements including respiratory protection*
- *Medical surveillance requirements*

Appendix D - Required Sign and Label Wording

Cadmium

Warning sign:
DANGER
CADMIUM
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS AND KIDNEYS
WEAR RESPIRATORY PROTECTION IN THIS AREA
AUTHORIZED PERSONNEL ONLY

Label:
DANGER
CONTAINS CADMIUM
CANCER HAZARD
AVOID CREATING DUST
CAN CAUSE LUNG AND KIDNEY DISEASE

Chromium (VI)

NOTE: *OSHA doesn't have specific wording requirements for chromium (VI) signs and labels. The sign and label wording below is recommended. Other wording may be used with the approval of either the Toxic Metals TA or the project's OS&IH Manager.*

Warning sign:
DANGER
CHROMIUM (VI)
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS AND LIVER
WEAR RESPIRATORY PROTECTION IN THIS AREA
AUTHORIZED PERSONNEL ONLY

Label:
DANGER
CONTAINS CHROMIUM (VI)
CANCER HAZARD
AVOID CREATING DUST
CAN CAUSE LUNG AND LIVER DISEASE

Appendix D – (Cont.)

Lead

Warning sign:
DANGER
LEAD WORK AREA
MAY DAMAGE FERTILITY OR THE UNBORN CHILD
CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM
DO NOT EAT, DRINK OR SMOKE IN THIS AREA

Label:
DANGER: CLOTHING AND EQUIPMENT CONTAMINATED WITH LEAD. MAY DAMAGE FERTILITY OR THE UNBORN CHILD. CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM. DO NOT EAT, DRINK OR SMOKE WHEN HANDLING. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.